

# Glossary

## A

### Additive Identity Property

When zero is added to any number, its value does not change:  $a + 0 = a$ . (p. 18)

### Additive Inverse Property

A number added to its opposite (additive inverse) equals zero:  $a + (-a) = 0 = -a + a$ . (p. 18)

### algebraic equation

An equation that contains one or more variables. (p. 54)

### algebraic expression

An expression that contains one or more variables. (p. 52)

### area

Region covered by the inside of a figure. Area is measured in square units. (p. 34)

### arithmetic sequence

A sequence of numbers in which there is a *common difference* between successive numbers. (p. 50)

### ascending order

Arranged in order from low to high. (p. 12)

### Associative Property of Addition

Grouping numbers does not change a sum:  $(a + b) + c = a + (b + c)$ . (p. 18)

### Associative Property of Multiplication

Grouping factors does not change a product:  $(a \times b) \times c = a \times (b \times c)$ . (p. 18)

## B

### base (of a power)

The number and/or variable in a power that is used as a factor. For example, in  $4^3$ , 4 is the base. In  $(2y)^5$ ,  $2y$  is the base. (p. 14)

### bases (of a parallelogram or trapezoid)

The sides of the figure perpendicular to the height. (p. 34)

### box-and-whisker plot

A display of data which shows the median values of a set. The middle 50% of the data is “boxed” out by a rectangle and the remaining data is shown as “whiskers” at both ends. (p. 70)

## C

### certain event

An event which has a probability of 1. It is certain to occur. (p. 76)

### circle

The set of all points, in a plane, equidistant from a fixed point. (p. 38)

### circumference

The distance around a circle, also known as the perimeter of the circle. (p. 38)

### common difference

The difference between any two successive terms in an arithmetic sequence. For the sequence, 5, 8, 11, 14, ... the common difference is 3. (p. 50)

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## common ratio

The ratio (multiplier) between any two successive terms in a geometric sequence. For the sequence, 16, 8, 4, 2, ... the common ratio is  $\frac{1}{2}$ . (p. 50)

## Commutative Property of Addition

The order of numbers can be switched and the sum will remain the same:  $a + b = b + a$ . (p. 18)

## Commutative Property of Multiplication

The order of factors can be switched and the product remains the same:  $a \times b = b \times a$ . (p. 18)

## congruent figures

Figures that have the same size *and* shape. (p. 48)

## coordinate plane

A grid used to help describe the location of points. (p. 44)

## corresponding

The angles and sides that are in the same position when comparing two or more similar or congruent figures. (p. 48)

## cross products

When a proportion is written as two equal fractions, the products of multiplying the factors diagonally across from each other are the same. (p. 24)

## cube

A rectangular prism with all sides the same length. (p. 40)

## cylinder

A three-dimensional figure with two congruent circles as bases. (p. 40)

## D

### data

Information about a group, situation, or event. (p. 68)

### decagon

A 10-sided polygon. (p. 42)

### denominator

The bottom number in a fraction, representing the total number of parts. In  $\frac{a}{b}$ , the denominator is  $b$ . (p. 10)

### descending order

Arranged in order from high to low. (p. 12)

### diameter

A line segment connecting points on a circle and passing through the center. It is twice the length of the radius. (p. 38)

### Distributive Property

$a(b + c) = ab + ac$ ;  $a(b - c) = ab - ac$  (p. 18)

## E

### equation

A statement that two quantities are equal. Every equation contains an equal sign (=). (p. 54)

### equivalent form

A representation of a number in another form. For example, 50%,  $\frac{1}{2}$ , and 0.50 are equivalent forms of the same number. (p. 10)

### experimental probability

What actually *does* occur as the result of an experiment. (p. 78)